

Serial No. 10/761,124

Docket No.: NOS-102

REMARKS

Applicants' undersigned attorney thanks the Examiner for the Examiner's comments. Applicants respectfully request reconsideration of this patent application, particularly in view of the above Amendment and the following remarks. Currently, Claims 1-35 are pending, with Claims 1-23 and 35 withdrawn from consideration.

Amendments to the Claims

Claims 24-34 have been examined with no claims being allowed.

Claims 1, 8, 24, 31, and 35 have been amended to limit the fuel cell to a solid oxide fuel cell. Claim 24 has been further amended to include the limitations of using an electrolyte material as the insulating layer of the sealing structure and the sealing layer including a material different from the electrolyte material. Support for these limitations is provided, for example, at page 10, last paragraph.

No new matter has been added by this Amendment. No additional fee is required because the number of independent claims remains unchanged and the total number of claims also remains unchanged.

Claim Rejections - 35 U.S.C. §112

The rejection of Claims 24-34 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement is respectfully traversed.

As indicated above, Applicants have amended Claim 24 to limit the fuel cell to a solid oxide fuel cell. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Serial No. 10/761,124

Docket No.: NOS-102

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Claim Rejections - 35 U.S.C. §102

A. Sato et al.

The rejection of Claims 24-29 and 31-33 under 35 U.S.C. §102(b) as being anticipated by Sato et al. (U.S. Patent No. 4,937,152) is respectfully traversed.

For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Sato et al. fail to disclose each and every element or limitation of amended Claim 24.

The Sato et al. reference concerns a high-temperature fuel cell with an air electrode, an electrolyte and a fuel electrode, wherein with respect to Figures 4 and 5 it is described that the air electrode is sealed by the electrolyte. The air electrode is in contact with the separator plate (3) and the air electrode is to be sealed by the electrolyte. The reason for this is to prevent the air electrode from contacting the electrolyte. Sato et al. fail to disclose dividing the spacers (10) between a sealing layer and an insulating layer, wherein the insulating layer is formed from an electrolyte material.

The Office Action claims the electrolyte layer is both the sealing layer and the insulating layer. Applicants have amended Claim 24 to clarify that the sealing layer includes a material different from the electrolyte material.

For at least the reasons given above, Applicants respectfully submit that the teachings of Sato et al. fail to disclose Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

B. Mizuno

The rejection of Claims 24 and 30 under 35 U.S.C. §102(b) as being anticipated by Mizuno (U.S. Patent No. 6,440,597) is respectfully traversed.

Mizuno fails to disclose each and every element or limitation of amended Claim 24. More particularly, Mizuno fails to disclose the steps of applying both an insulating layer and a sealing layer onto at least one predetermined sealing area of a separator plate for a solid oxide fuel cell. As noted by the Office Action, Mizuno is not directed to a solid oxide fuel cell.

Serial No. 10/761,124

Docket No.: NOS-102

For at least the reasons given above, Applicants respectfully submit that the teachings of Mizuno fail to disclose Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

C. Thompson et al.

The rejection of Claims 24 and 34 under 35 U.S.C. §102(b) as being anticipated by Thompson et al. (PCT Publication No. WO 99/54131) is respectfully traversed.

The final Office Action alleges at page 7 that Applicants argued limitations not recited in the claims. Claim 24 has been amended to recite that an electrolyte material is used as the insulating layer of the sealing structure.

The objective task of the subject application is to provide a fuel cell and a method for producing the fuel cell, wherein an effective sealing is provided that can be produced at low cost. The inventive solution of the present invention is to use the electrolyte material of the fuel cell as the sealing. Thompson et al. fail to disclose such use of an electrolyte material.

The present invention makes it possible to use the material that is necessary for building the fuel cell as an insulating layer and part of the sealing of the fuel cell. This simplifies the manufacturing of the fuel cell because, for example, when applying the electrolyte material on the substrate, the insulating layer of the sealing is produced simultaneously. A change of material that involves possibly a change of the manufacturing method can thus be abolished. The result is a cost advantage compared with manufacturing processes and fuel cells of the state of the art.

For at least the reasons given above, Applicants respectfully submit that the teachings of Thompson et al. fail to disclose Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Serial No. 10/761,124

Docket No.: NOS-102

Conclusion

Applicants believe that this case is now in condition for allowance. If the Examiner feels that any issues remain, then Applicants' undersigned attorney would like to discuss the case with the Examiner. The undersigned can be reached at (847) 490-1400.

Respectfully submitted,


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